

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) An apparatus for thin-layer metrology of semiconductor substrates, comprising:

at least one cassette element for the semiconductor substrates,

a first measurement unit for thin-layer micrometrology,

a transport mechanism being provided between the cassette element for the semiconductor substrates and the first measurement unit for thin-layer micrometrology, and

a measurement unit for thin-layer macrometrology, wherein the measurement unit for thin-layer macrometrology is positioned in a region of the transport mechanism, after the cassette element and before the first measurement unit for thin-layer micrometrology such that the semiconductor substrates are guided transported from the cassette element beneath the measurement unit for thin-layer macrometrology to the first measurement unit for thin-layer micrometrology, wherein the measurement unit for thin-layer macrometrology projects a line of light onto the semiconductor substrates and acquires is configured such that an image of an entire surface of each the substrate is acquired during the guidance of the semiconductor substrates from the cassette element to the first measurement unit for thin-layer micrometrology.

2. (Original) The apparatus as defined in Claim 1, wherein the apparatus for thin-layer metrology of semiconductor substrates is enclosed by a housing, the housing defining a basal area.

3. (Previously Presented) The apparatus as defined in Claim 2, wherein the first measurement unit for thin-layer micrometrology and the measurement unit for thin-layer macrometrology are arranged within the housing of the apparatus in such a way that the basal area is no larger than the basal area of an apparatus for thin-layer metrology that contains only a measurement unit for thin-layer micrometrology.

4. (Canceled).

5. (Canceled).

6. (Previously Presented) The apparatus as defined in Claim 1, wherein the measurement unit for thin-layer macrometrology comprises a macrophotometer.

7. (Previously Presented) The apparatus as defined in Claim 1, wherein the transport mechanism comprises a feeder that transports the semiconductor substrates from the cassette element to the first measurement unit for thin-layer micrometrology.

8. (Previously Presented) The apparatus as defined in Claim 1, wherein in the apparatus for thin-layer metrology, the semiconductor substrates are pullable with a feeder out of the cassette element for delivery into the first measurement unit for thin-layer micrometrology, the semiconductor substrates being guidable beneath the measurement unit for thin-layer macrometrology; and measured values being automatically acquirable.

9. (Original) The apparatus as defined in Claim 1, wherein the semiconductor substrates are wafers.

10. (Currently Amended) A method for thin-layer metrology comprising the following steps:

transferring semiconductor substrates out of at least one cassette element to a measurement unit for thin-layer micrometrology using a transport mechanism provided between the cassette element and the measurement unit for thin-layer micrometrology, the semiconductor substrates being guided beneath past a measurement unit for thin-layer macrometrology during transport to the measurement unit for thin-layer micrometrology;

projecting a line of light from the measurement unit for thin-layer macrometrology onto the semiconductor substrates;

acquiring an image of an entire surface of each the semiconductor substrate substrates in the measurement unit for thin-layer macrometrology during the guidance of the semiconductor substrates from the cassette element to the measurement unit for thin-layer micrometrology;

determining from the acquired image one or more measurement locations on the semiconductor substrates that indicate one or more defects that must be examined more closely;

transferring data of the one or more identified measurement locations to a computer;
and

adjusting the measurement unit for thin-layer micrometrology to the one or more identified measurement locations and performing a detailed measurement of the one or more defects with the measurement unit for thin-layer micrometrology.

11. (Previously Presented) The method as defined in Claim 10, wherein the one or more measurement locations identified in the determination step are used as a preselection of the semiconductor substrates to be measured with the measurement unit for thin-layer micrometrology, the one or more measurement locations for the measurement unit for thin-layer micrometrology being transferred automatically.

12. (Original) The method as defined in Claim 10, wherein further semiconductor substrates are delivered to the measurement unit for thin-layer macrometrology while a semiconductor substrate is being assessed microscopically in the measurement unit for thin-layer micrometrology.

13. (Previously Presented) The method as defined in Claim 10, wherein the determination of the one or more measurement locations on the semiconductor substrates by the measurement unit for thin-layer macrometrology supplies measured values that are used, by way of an evaluation of defined monitoring thresholds, for a decision as to whether and at which microscopic points on the semiconductor substrate measurements are to be performed with the measurement unit for thin-layer micrometrology.

14. (Canceled).

15. (Canceled).

16. (Previously Presented) The method as defined in Claim 10, wherein the measurement unit for thin-layer macrometrology comprises a macrophotometer.

17. (Previously Presented) The method as defined in Claim 10, wherein the transport mechanism comprises a feeder.

18. (Previously Presented) The method as defined in Claim 10, wherein the one or more measurement locations determined in the measurement unit for thin-layer macrometrology and the corresponding one or more measurement locations in the measurement unit for thin-layer micrometrology are related by coordinate transformation.

19. (Previously Presented) The apparatus as defined in Claim 1, wherein the first measurement unit for thin-layer micrometrology comprises a microphotometer, a microellipsometer, or a combination thereof.

20. (Previously Presented) The method as defined in Claim 10, wherein the measurement unit for thin-layer micrometrology comprises a microphotometer, a microellipsometer, or a combination thereof.